


1-8 Algebra properties 11/5/12

Objective SWBAT use commutative, Associative, identity and Distributive properties to solve problems.

Distributive "mountains or rainbows"

$$\begin{aligned} 3(4+6) &= 3(4) + 3(6) \\ &= 12 + 18 \\ &= 30 \end{aligned}$$
$$\begin{aligned} 3(4+6) &= 3(10) \\ &= 30 \end{aligned}$$

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Ex. 1

Use the
Distributive
propertyCommutative
Property
"order"

$$\begin{aligned} 6(1+4) &= 6(1) + 6(4) \\ &= 6 + 24 \\ &= 30 \end{aligned}$$

The order in which two #'s
are added / multiplied does not
change their sum or product

$$3+2 = 5$$

$$2+3 = 5$$

$$4 \cdot 3 = 12$$

$$3 \cdot 4 = 12$$

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Associative
property
"grouping"

The way in which 3 numbers
are grouped when they are
added or multiplied does not
change their sum or product

$$(1+2)+3=6$$

$$3+3=6$$

$$(2 \cdot 2) \cdot 3 = 12$$

$$4 \cdot 3 = 12$$

$$1+(2+3)=6$$

$$1+5=6$$

$$2 \cdot (2 \cdot 3) = 12$$

$$2 \cdot 6 = 12$$

Identity
property

Additive (0)

$$4 + \underline{-4} = 0$$

multiplicative (1)

$$\frac{1}{3}(3) = 1$$

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$$\begin{array}{l|l} (13 + 31) + 17 & \text{Solve and Justify} \\ & \text{each step} \\ = 44 + 17 & \leftarrow \text{Associative (+)} \\ \hline = 61 & \leftarrow \text{Added} \end{array}$$

$$85 + (46 + 15) =$$

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$$\begin{aligned}\underline{7(a) - 7(3)} &= 7(a - 3) \\ &= 7(6) \\ &= 42\end{aligned}$$

Pg. 55 # 1-25 odd

$$37 + 38$$

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